Claims

1. A method for navigating in real time in a three dimensional medical image model, the method comprising:

displaying an orientation view of the medical image model on a display;

adjusting a location related to the displayed orientation view of the medical image model based on a pointing device alignment;

displaying an inside view related to the location into the medical image model; and

adjusting a viewing direction to the inside view of the medical image model based on a detected orientation of the pointing device.

2. The method of claim 1, wherein the orientation view is a surface view of the medical image model.

3. The method of claim 1, wherein the pointing device comprises a pen and a tablet surface.

4. The method of claim 3, wherein the detected orientation used in adjusting the viewing direction to the inside view of the medical image model is the detected tilt angle and orientation between the pen and the tablet surface.

5. The method of claim 3, the method further comprising detecting the pointing device alignment based on the pen tip position on the tablet surface.

6. The method of claim 3, the method further comprising detecting the pointing device alignment based on the pen tilt angle in relation to the tablet surface.

7. The method of claim 3, the method further comprising proceeding the inside view of the medical image model deeper into the medical image model depending on the pressure between the pen and the tablet surface.

8. The method of claim 1, wherein the pointing device comprises an adjusting device and the method further comprising adjusting different parameters of the medical image model by the adjustment device.

9. The method of claim 8, the method further comprising adjusting the parameters independently of the orientation of the pointing device by the adjustment device.

10. The method of claim 8, wherein the parameters that are adjusted by the adjustment device are used for proceeding the inside view

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deeper into the medical image model or for adjusting transparency, contrast and/or threshold of the medical image model.

11. The method of claim 1, wherein the inside view of the medical image model comprises one or more medical image slices or other reconstruc-
5 tions and the adjusting of the viewing direction to the inside view of the medical image model comprises rendering of the medical image slices with respect to the location related to the orientation view of the medical image model.

12. The method of claim 11, the method further comprising generating said one or more medical image slices from two-dimensional image data.

10 13. The method of claim 11, the method further comprising orienting the rendered medical image slices or other reconstructions in relation to the detected orientation of the pointing device.

14. The method of claim 11, wherein the rendered medical image slices are three orthogonal planes, one of the planes being perpendicular with
15 the axis oriented in relation to the detected orientation of the pointing device.

15. The method of claim 1, wherein adjusting the location on the displayed orientation view of the medical image model comprises synchro- nously rotating a viewpoint to the orientation view of the medical image model on the display.

20 16. The method of claim 1, wherein before displaying the inside view the method further comprises setting and displaying a navigation point on the orientation view of the medical image model, the navigation point indicating the location.

17. The method of claim 1, the method further comprising recording
25 data related to the navigated three-dimensional medical image model to a memory.

18. The method of claim 17, wherein the recorded data comprises one or more images, audio, video, annotation data or any combination thereof.

19. A system for navigating in real time in a three-dimensional
30 medical image model, the system comprising a control unit for controlling the functions of the system, a pointing device connected to the control unit and a display connected to the control unit, the control unit being configured to:

display an orientation view of the medical image model on the dis- play;

35 adjust a location related to the displayed orientation view of the medical image model based on the pointing device alignment;

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display an inside view related to the location into the medical image model; and

adjust a viewing direction to the inside view of the medical image model based on a detected orientation of the pointing device.

20. The system of claim 19, wherein the orientation view is a surface view of the medical image model.

21. The system of claim 19, wherein the pointing device comprises a pen and a tablet surface.

22. The system of claim 21, wherein the control unit is configured to adjust the viewing direction to the inside view of the medical image model based on a detected orientation between the pen and the tablet surface, the orientation being a tilt angle and direction between the pen and the tablet surface.

23. The system of claim 21, wherein the control unit is configured to detect the pointing device alignment based on the pen tip position on the tablet surface.

24. The system of claim 21, wherein the control unit is configured to detect the pointing device alignment based on the pen tilt angle in relation to the tablet surface.

25. The system of claim 21, wherein the control unit is configured to proceed the inside view of the medical image model deeper into the medical image model depending on the pressure between the pen and the tablet surface.

26. The system of claim 19, wherein the pointing device comprises an adjusting device and the control unit is configured to adjust different parameters of the medical image model by the adjustment device.

27. The system of claim 26, wherein the control unit is configured to adjust the parameters independently of the orientation of the pointing device by the adjustment device.

28. The system of claim 26, wherein the parameters that are adjusted by the adjustment device are used for proceeding the inside view deeper into the medical image model or for adjusting transparency, contrast and/or threshold of the medical image model.

29. The system of claim 19, wherein the inside view of the medical image model comprises one or more medical image slices or other reconstructions and the control unit is configured to adjust the viewing direction to the

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inside view of the medical image model by rendering of the medical image slices with respect to the orientation view of the medical image model.

30. The system of claim 28, wherein the control unit is configured to orient the rendered medical image slices or other reconstructions in relation to the detected orientation of the pointing device.

31. The system of claim 28, wherein the rendered medical image slices are three orthogonal planes, one of the planes being perpendicular with the axis oriented in relation to the detected orientation of the pointing device.

32. The system of claim 19, wherein the control unit is configured to adjust the location by rotating a viewpoint to the orientation view of the medical image model on the display.

33. The system of claim 19, wherein before displaying the inside view the control unit is further configured to set and display a navigation point on the orientation view of the medical image model, the navigation point indicating the location.

34. The system of claim 19, the system further comprising a memory and wherein the control unit is configured to record data related to the navigated three-dimensional medical image model to the memory.

35. The system of claim 33, wherein the recorded data comprises one or more images, audio, video, annotation data or any combination thereof.